

# **GUHRING**



## **Dental technology milling cutters**

- for cobalt chrome, zirconium, titanium and plastic
- in application-oriented tool materials
- with material specific coatings
- with special geometries for highest accuracy

**Edition 2010**

**Guhring's DF 100 dental milling cutter - your advantages at a glance**

- **efficient tooling solutions perfectly adapted for your application and machine**
- **the optimal tool for your specific application**
- **maximum speed for short machining times**
- **maximum tool life for increased productivity**
- **low production costs thanks to full use of the machine potential**
- **optimal and reliable quality for a certain production**

For more than 100 years, Guhring has been a reliable and competent partner for all industries requiring highest machining accuracy and quality. They include the automotive, aerospace, machine-building and micro-machining industries as well as the medical industry.

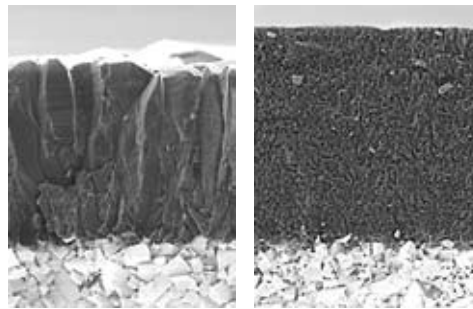
To satisfy the high demands of our customers, Guhring has at its disposal the development and manufacturing expertise for tool materials, coatings, tool geometries and production plants. This ensures that we can always supply our customers with the optimal tool for their specific application - either from our standard tool range or as an individually designed special solution.

Furthermore, the equipment in our research and development centre is also available to customers for analysing their manufacturing process, i.e. for metallurgical material analyses, REM-examinations of surface structures, thermal imaging during the machining process or machining trials in our test facility.

Thanks to the world-wide presence with production and service centres as well as own distribution companies in every continent, Guhring is also internationally positioned to provide made-to-measure solutions for customer machining tasks all over the world.

**Optimising tools - an example**

The diamond-coated DF 100 dental milling cutter for the machining of zirconium, for example, shows the advantages resulting from an optimal tool design. Whilst in the left picture the coarse structure of the carbide as well as the coating and the resulting rough surface quality can clearly be recognised, the picture on the right shows the perfect, fine structure as well as the interface between the Guhring carbide and the Guhring diamond coating for an especially smooth surface finish offering long tool life.



**Tools for the dental industry**

For fundamental applications in dental technology we have introduced a standard range of DF 100 dental milling cutters for various open and closed CAD/CAM systems. Details regarding the design and the sizes available at short notice can be found on the opposite page.

We gladly provide special solutions to customer specifications, i.e. adapting dimensions, tool material and coating to the customer's machine and to the material to be machined to optimise the economic efficiency. Please contact us!



## DF 100 CoCr dental milling cutters

### Ball nosed and cutting to centre

<b>Standard</b>					
<b>Tool material</b>					
<b>Surface finish</b>					
<b>Application</b>					
<b>Shank form</b>					
<b>Helix angle</b>					
d1	d2	l1	l2	l3	Z
mm	mm	mm	mm	mm	
1.0	4.0	50.0	1.0	10.0	4
1.5	4.0	50.0	1.5	12.5	4
2.0	4.0	50.0	2.0	12.5	4
3.0	6.0	57.0	2.5	15.0	4
3.0	3.0	38.0	2.5	18.0	2
3.0	6.0	42.0	3.5	18.0	2

<b>Guhring std.</b>	
<b>DK 500 UF</b>	
<b>TiAlN</b>	
<b>cobalt chrome</b>	
<b>HA</b>	
<b>30°</b>	
Guhring no.	Unit price in €
302282965	<b>48,00</b>
302282964	<b>47,00</b>
302282963	<b>47,00</b>
302282962	<b>49,00</b>
302132043	<b>41,00</b>
302368802	<b>51,00</b>

## DF 100 Zi dental milling cutters

### Ball nosed and cutting to centre

<b>Standard</b>					
<b>Tool material</b>					
<b>Surface finish</b>					
<b>Application</b>					
<b>Shank form</b>					
<b>Helix angle</b>					
d1	d2	l1	l2	l3	Z
mm	mm	mm	mm	mm	
1.0	3.0	43.0	2.0	13.0	2
2.5	3.0	43.0	3.0	20.0	2

<b>Guhring std.</b>	
<b>DK 120 UF</b>	
<b>Diamond Dental</b>	
<b>zirconium</b>	
<b>HA</b>	
<b>30°</b>	
Guhring no.	Unit price in €
302357177	<b>78,00</b>
302357176	<b>74,00</b>

## DF 100 Ti dental milling cutters

### Ball nosed and cutting to centre

<b>Standard</b>					
<b>Tool material</b>					
<b>Surface finish</b>					
<b>Application</b>					
<b>Shank form</b>					
<b>Helix angle</b>					
d1	d2	l1	l2	l3	Z
mm	mm	mm	mm	mm	
1.0	4.0	50.0	1.0	10.0	2
1.5	4.0	50.0	1.5	12.5	2
2.0	4.0	50.0	3.0	12.5	2
3.0	6.0	57.0	4.0	15.0	2

<b>Guhring std.</b>	
<b>DK 460 UF</b>	
<b>TiAlN</b>	
<b>Ti/nonprecious metals</b>	
<b>HA</b>	
<b>30°</b>	
Guhring no.	Unit price in €
302286240	<b>47,00</b>
302319489	<b>46,00</b>
302286241	<b>46,00</b>
302286242	<b>48,00</b>

## DF 100 Ku dental milling cutters

### Ball nosed and cutting to centre

<b>Standard</b>					
<b>Tool material</b>					
<b>Surface finish</b>					
<b>Application</b>					
<b>Shank form</b>					
<b>Helix angle</b>					
d1	d2	l1	l2	l3	Z
mm	mm	mm	mm	mm	
1.0	3.0	43.0	2.0	15.0	2
2.5	3.0	43.0	3.0	20.0	2

<b>Guhring std.</b>	
<b>DK 460 UF</b>	
<b>bright</b>	
<b>plastic/wax</b>	
<b>HA</b>	
<b>30°</b>	
Guhring no.	Unit price in €
302366236	<b>36,00</b>
302366235	<b>34,00</b>

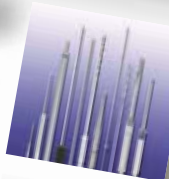
Guhring standard dental milling cutters for various open and closed CAD/CAM systems. Special solutions available on request.

# GUHRING

## TOOLS FOR THE MEDICAL AND DENTAL INDUSTRY

Stainless and acid-resistant tools for medical industry applications

- Drills in the diameters from 0.7 to 20 mm
- Cannula tools up to approx. 400 mm length
- Saws with different tooth profiles
- Hollow drills and milling cutters with two/three and more flutes
- Micro-precision drills with various shank forms
- Special tools with extreme diameter/length ratio



Please request our brochure  
"Tools for the Medical and Dental Industry"  
with stainless and acid-resistant tools  
for medical industry applications.

# GUHRING

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